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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,224	07/12/2000	Thomas Beck Mason	23444-712	3351

22462 7590 03/25/2003

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EXAMINER

ZAHN, JEFFREY N

ART UNIT	PAPER NUMBER
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2828

10

DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

82

Office Action Summary

Application No.

09/614,224

Applicant(s)

MASON ET AL.

Examiner

Jeffrey N Zahn

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Paul IP

PAUL IP

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-76 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1-76, the Applicant claims a method of making laser diode assembly; however it is unclear from the recited steps what structural relationships result from the method steps claimed. These claims recite a substrate, epitaxial structure, waveguide layers, laser and amplifier regions without providing the details to describe the metes and bounds of the claimed invention. In addition, it is not clear what the resulting structure will comprise other than the broad assertion of a "diode laser assembly."

Further, it is not clear what the Applicant is claiming as "active" and "inactive" areas.

Regarding Claims 3-6 and 35-38, in addition to the discussion above regarding Claims 1-76, it is unclear what "in active" areas are formed using the claimed growth processes.

Regarding Claims 9-11 and 41-43, in addition to the discussion above regarding Claims 1-76, it is unclear what specific area of the diode laser assembly is being subjected to the methods claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-76 are rejected under 35 U.S.C. 102(b) as being anticipated by Welch et al. (US 5539571).

Regarding Claims 1 and 33, Welch et al. discloses a method of making a diode laser assembly comprising:

providing a substrate (9);

forming an epitaxial structure (Fig. 1; see also col. 4, line 46- col. 5, line 46) on the substrate, the epitaxial structure having optically active (abstract; waveguide) and optically inactive areas (abstract; amplifier regions);

forming a waveguide layer (13) in the epitaxial structure (Fig. 1); and

forming a laser (11) and an amplifier (19)(23) in the epitaxial structure containing the waveguide layer.

Regarding Claims 2 and 34, the active region may be a MQW structure (col. 4, lines 59 -66).

Regarding Claims 7, 8, 39 and 40, Welch et al. discloses that a MQW on top of the waveguide layer (Fig. 2) and areas of different bandgaps in the epitaxial structure (col. 4, line 45- col. 5, line 16).

Regarding Claims 12, 19-29, the amplifier includes an active (23) and passive region (19) as claimed.

Regarding Claims 13-18, and 45-50, see Fig. 1 for the claimed features.

Regarding Claims 30-32 and 62-64, the diode laser (11) has a first (15) and second (17) DBR's. These DBR's have the effect of being tunable (col. 6, lines 10-31).

Response to Arguments

The arguments submitted by the Applicant in Paper No. 9, entered in the Application on 08January2003, have been considered but are not persuasive.

Regarding Claims 1-76, as rejected under 35 U.S.C. 112, second paragraph, and discussed above, the Applicant has made the assertion that the claims are not indefinite; this is not persuasive.

Regarding Claims 1-76, as rejected under 35 U.S.C. 102(b) as being anticipated by Welch et al. (US 5539571), the Applicant argues that the Welch prior art reference does not disclose at least a portion of the waveguide being curved and the waveguide intersecting an output facet at an oblique angle." This is not persuasive because Fig. 1 of Welch et al. discloses a waveguide portion being flared (25) which does have curves where the waveguide intersects region (21). In addition, Welch discloses, Fig. 1, the waveguide region (25) intersecting the output facet region at an oblique angle. This is evidenced in Fig. 1 by the path of the laser beam.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


Art Unit: 2828

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey N Zahn whose telephone number is 703-305-3443. The examiner can normally be reached on M-F: 8:30-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 703-308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Jeffrey Zahn
March 18, 2003


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